



AWT4-3997

Common Name Modular Tri-Sector T4 Series - 72 Port (24P/48P).

698-960MHz	24	eRET	15.0	69°
1710-2690MHz	48	eRET	17.8	62°
Frequency	Ports	Tilt	Gain	Beamwidth

PRODUCT INFORMATION

Stack	Part Name	Description
1	Base Stack	This is the Base Stack supplied with the AWT4-3997.
2	The Extension Stack -X2	The Extension Stack X2 is mounted on top of the Base Stack.
3	The second Extension Stack -X3	The Extension Stack X3 is mounted on top of extension Stack X2
4	The third Extension Stack -X4	The Extension Stack X4 is mounted on top of Stack X3 for additional capacity.

Stack Type	Frequency Bands	Ports per Stack
Base Stack	698-960MHz	6
	1695-2690MHz	12
First Extension Stack	698-960MHz	6
	1695-2690MHz	12
Second Extension Stack	698-960MHz	6
	1695-2690MHz	12
Third Extension Stack	698-960MHz	6
	1695-2690MHz	12



APPLICATION

Canisters support multiple antennas into one attractive package. These canisters deliver an elegant macro solution for pole-top, rooftop and streetworks applications. Alpha Wireless produces one of the smallest diameter canisters in the marketplace. This canister is capable of having external Active Antenna Units mounted onto the canister top plate.

STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015
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FEATURES

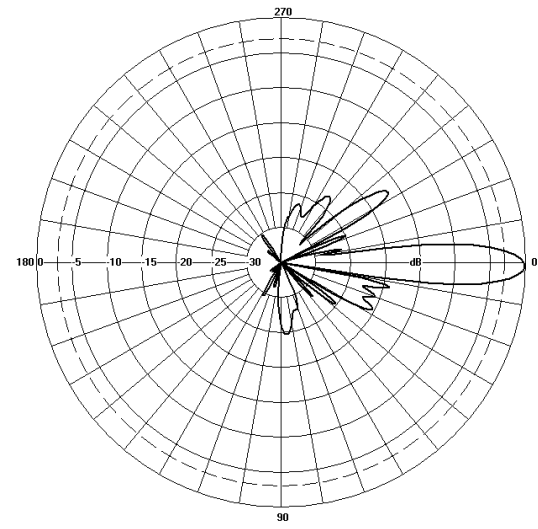
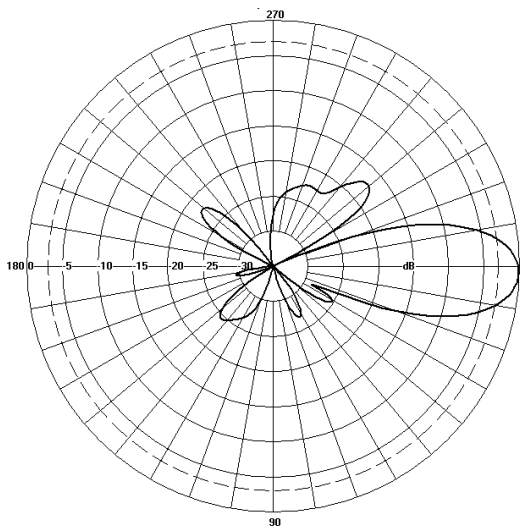
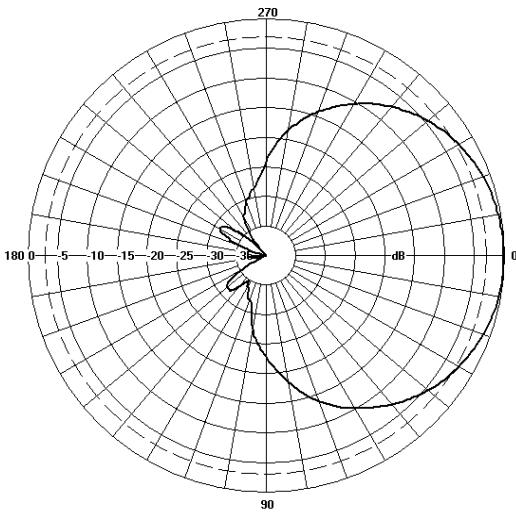
- High port count and quad stacked arrays suitable for Multi-Operator / Site Sharing / Neutral Host applications.
- Three sector canister with sectors orientated at 0°, 120° and 240° in the Azimuth Plane
- 698-960MHz x 2 Ports per sector
- 1695-2690MHz x 4 Ports per sector
- 698-960MHz tilt range T2° - T12°.
- 1695MHz tilt range T2° - T12°.
- Low PIM performance to reduce interference.
- Flange mount design.
- Structure and Top Plate design to accommodate external Active Antenna Units.

The parameters in this specification follow the definitions and recommendations per NGMN P-Basta, Release 9.6.

TECHNICAL SPECIFICATION

Electrical Specifications		Low Band			Mid Band			
Frequency Range	MHz	698-790	790-890	890-960	1710-1920	1920-2170	2300-2690	
Polarisation	Degree	±45° Slant Linear						
Gain	Basta	dB	13.8±0.5	14.5±0.5	14.5±0.5	16.8±0.5	17.1±0.5	17.3±0.5
	Max	dB	14.3	15.0	15.0	17.3	17.6	17.8
Azimuth Beamwidth	Degree	72°	69°	67°	63°	62°	66°	
Azimuth Beam Squint	Degree<	5°			5°			
Elevation Beamwidth	Degree	16.2°	14.6°	13.4°	7.2°	6.5°	5.5°	
Electrical Downtilt	Degree	T2° - T12°			T2° - T12°			
Electrical Downtilt Deviation	Degree<	1.5°	1.5°	1.5°	1°	1°	1°	
Impedance	Ohms	50						
VSWR	<	1.5						
Return Loss	dB>	14						
Isolation	dB>	25	25	25	25	25	25	
Passive Intermodulation	dBc<	-150	-150	-150	-150	-150	-150	
Upper Sidelobe Suppression, Peak to 20°	dB>	22	22	22	17	16	13	
Cross-Polar Discrimination	dB>	15	15	15	15	15	15	
Max Power Per Port	W	300			250			

Radiation Pattern Files



Azimuth

Elevation

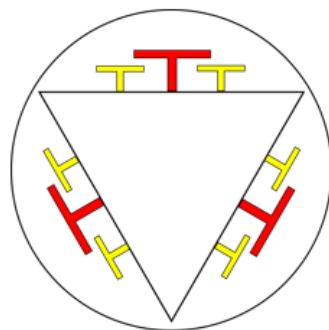
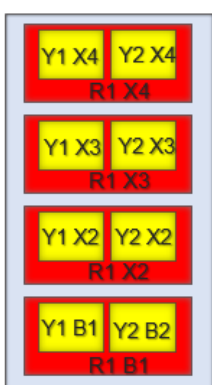
For radiation pattern files, please login at www.alphawireless.com

TECHNICAL SPECIFICATION

Mechanical Specifications

Dimensions Base + Extension(s) (Length x Diameter)	mm (in)	7850 (309) x 485 (26.5) - (L x Ø)
Dimensions Base (Length x Diameter)	mm (in)	2250 (88.6) x 485 (19.1) - (L x Ø)
Dimensions Extension (Length x Diameter)	mm (in)	1850 (72.8) x 485 (19.1) - (L x Ø)
Weight of Base Stack	kg (lb)	210 (463)
Weight of Extension Stack	kg (lb)	160 (353)
Total Tri-Sector Weight	kg (lb)	
Connector Type (Female)	-	4.3-10
Connector Position	-	Bottom
Connector Quantity	-	72 (24P Low band, 48P Mid band)
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	3810 (856)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	3810 (856)
Survival Wind Speed	km/h (mph)	241 (150)
Radome Material	-	UV Stabilised PVC
Radome Colour	RAL	7035 (light grey)
Product Compliance Environmental	-	RoHS
Lightning Protection	-	DC Grounded
Cold Temperature Survival	°C (°F)	-40 (-40)
Hot Temperature Survival	°C (°F)	70 (158)
Shipping Information	-	-
Size of Crate 1 - Base Stack and Interface (LxWxD)	mm (in)	
Size of Crate 2 - Extension Stack (LxWxD)	mm (in)	
Shipping Weight of Crate 1 - Base Stack	kg (lb)	
Shipping Weight of Crate 2 - Extension Stack	kg (lb)	

Array Layout and RET Information



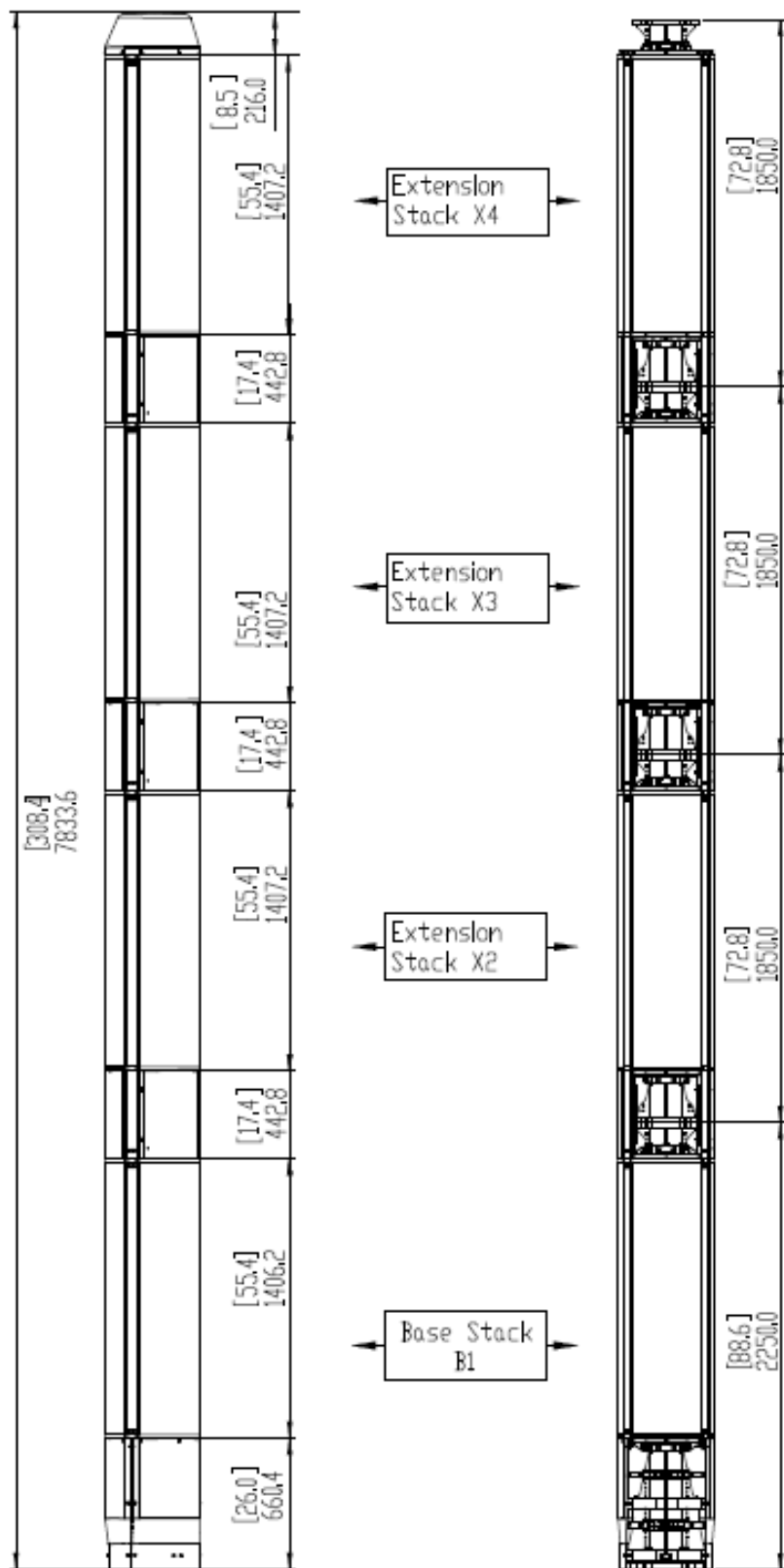
Array layout depicts the four modular antenna stacks. There are two sectors per stack.

Array	Extension	Frequency MHz	Ports	RET
R1	B1	698 - 960	1 - 2	1
R1	X2		3 - 4	2
R1	X3		5 - 6	3
R1	X4		7 - 8	4
Y1	B1	1710 - 2690	9 - 10	5
Y2	B1		11 - 12	6
Y1	X2		13 - 14	7
Y2	X2		15 - 16	8
Y1	X3		17 - 18	9
Y2	X3		19 - 20	10
Y1	X4		21 - 22	11
Y2	X4		23 - 24	12

Configuration	
698 - 960 MHz	One RET per array: (R1 x 4) x 3 Sectors
1695 - 2690 MHz	One RET per array: (Y1 x 4 ,Y2 x 4) x 3 Sectors
Total Quantity	Thirty-Six RET Motor Controllers
Location and Interface	
RET Controller Location	Inside antenna radome housing
RET Interface	Pair of AISG 8 Pin DIN connectors, one male, one female
RET Interface Quantity	Three pairs of AISG 8 Pin DIN connectors, one per sector
RET Interface Location	On connector plate located at bottom of antenna
Electrical	
Input Voltage	10 - 30V
Power Idle Mode	< 1W
Power Active Mode	< 10W
Protocol	3GPP / AISG 2.0

TECHNICAL SPECIFICATION

Mechanical Illustration

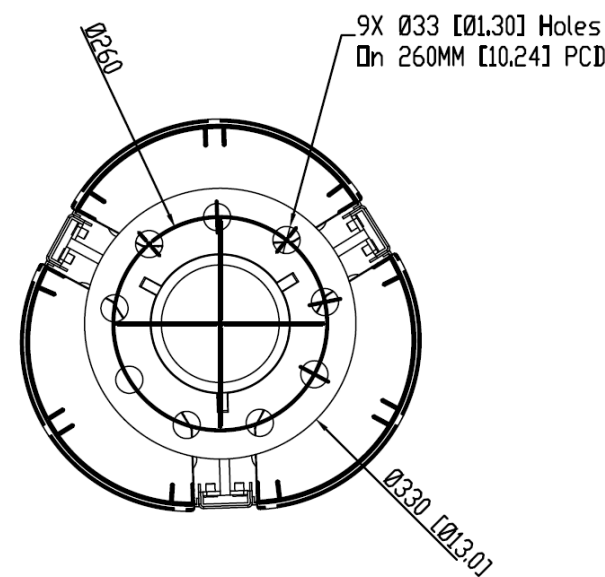
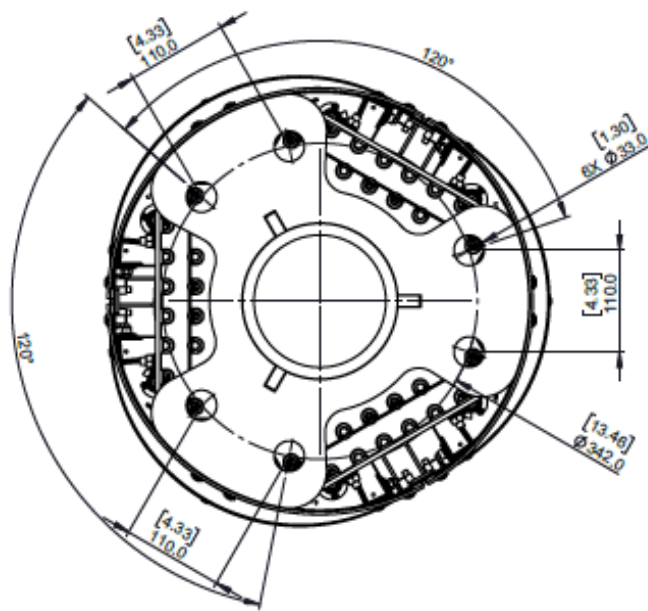


Description of Parts	
Base Stack	The top of the Base Stack has a mounting flange onto which an optional Extension Stack may be mounted.
Extension Stack	There are three Extension Stacks (X2, X3 and X4) supplied with the AWT4-3997 that mount on the Base Stack (B1). Extension Stack X1 is mounted on the Base Stack B1. Extension Stack X2 is mounted on top of Extension Stack X1. Extension Stack X3 is mounted on top of Extension Stack X2.
RF Jumpers Base Stack	Feeders from the Radio Cabinet feed directly into the connectors located at the bottom of the Base Stack.
RF Jumpers Extension Stack	RF Jumpers are routed down from each of the Extension Stacks (X2, X3 and X4). These are quarter inch RF Coax Feeders and are positioned in between the Radome Sectors. They are routed down to the Cable Management Access Hatch located at the base of the Tri-Sector antenna.

TECHNICAL SPECIFICATION

Mounting Bracket Kit

3 inch Bracket description



Extension Flange

Ordering Info

Order Code - Antenna	Description
AWT4-3997	Modular Tri-Sector T4 Series - 72 Port - Enclosed Remote Electrical Tilt (eRET) with 4.3-10 Connectors.
Order Code - Accessories	Description
AW1012-2-FM-FM	RF Jumper Cable, connector types 4.3-10 (m) / 4.3-10 (m), length 2 metres (6'6")
AW1012-2-FM-NM	RF Jumper Cable, connector types 4.3-10 (m) / N-Type (m), length 2 metres (6'6")
AW1014-2-FM-TM	RF Jumper Cable, connector types 4.3-10 (m) / Nex10 (m), length 2 metres (6'6")
PADC 1000	Portable AISG Controller
AW0326-3-PM-PF	AISG Jumper Cable Lengths 3 metres (9' 10")
AW0326-10-PM-PF	AISG Jumper Cable Lengths 10 metres (32' 9")
AW0326-25-PM-PF	AISG Jumper Cable Lengths 25 metres (82')
AW0326-50-PM-PF	AISG Jumper Cable Lengths 50 metres (164')

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